DOCUMENT RESUME

ED 457 401 CE 082 462

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TITLE	Targeting Welfare-to-Work Services Using Statistical Tools.
INSTITUTION	Upjohn (W.E.) Inst. for Employment Research, Kalamazoo, MI.
SPONS AGENCY	Employment and Training Administration (DOL), Washington, DC.
ISSN	ISSN-1075-8445
PUB DATE	2001-10-00
NOTE	5p.
AVAILABLE FROM	W.E. Upjohn Institute for Employment Research, 300 South Westnedge Avenue, Kalamazoo, MI 49007. Tel: 616-343-4330; Fax: 616-343-7310; e-mail: publications@we.upjohninst.org, Web site: http://www.upjohninst.org. For full text: http://www.upjohninst.org/publications/newsletter/rwe_1001.pdf.
PUB TYPE	Journal Articles (080)
JOURNAL CIT	Employment Research; v8 n4 p1-3 Oct 2001
EDRS PRICE	EDRS Price MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	*Client Characteristics (Human Services); Data Analysis; Decision Making; Demonstration Programs; Educational Assessment; *Employment Services; Evaluation Methods; *Individual Needs; Information Utilization; Labor Turnover; *Needs Assessment; Pilot Projects; Program Effectiveness; Program Evaluation; Referral; Research Tools; *Statistical Analysis; Statistical Data; Systems Approach; Tenure; *Welfare Recipients
IDENTIFIERS	Customized Training; Michigan (Kalamazoo); Michigan (Saint Joseph County); Statistical Packages; Welfare Reform; *Welfare to Work Programs

ABSTRACT

In January 1998-March 2000, a new statistical assessment and referral system to improve the job retention of welfare recipients participating in welfare-to-work programs was piloted in the welfare-to-work program serving two counties in southwestern Michigan. The assessment and referral system is based on statistical methods and uses administrative data. It is designed to be integrated into an existing intake process, require minimal (if any) additional staff, and comply with the procedures and practices of existing welfare-to-work programs. During the pilot, more than 6,000 welfare recipients participated in the program. Rather than providing all clients with essentially the same set of services, staff evaluated each client individually by collecting information about each new client's educational and employment histories and analyzing that information with a statistical assessment tool based on the statistical relationship between an individual's attributes and job retention. Clients' scores were used to determine the level and type of employment services that might help the individual find employment. An evaluation based on a random assignment design established that the statistical assessment tool yielded retention rates that were 25% higher than when participants were randomly assigned to providers. The difference in retention rates between the best and worst referral combinations was 56%. (MN)

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ED 457 401

W.E. Upjohn Institute
Employment Research
Volume 8 No. 4
October 2001

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Employment Research is published quarterly by the W.E. Upjohn Institute for Employment Research. issues appear in January, April, July, and October.

The Institute is a nonprofit research organization devoted to finding and promoting solutions to employment-related problems at the national, state, and local level. The Institute is an activity of the W.E. Upjohn Unemployment Trustee Corporation, which was established in 1932 to administer a fund set aside by the late Dr. W.E. Upjohn, founder of the Upjohn Company, to conduct research on the causes and effects of unemployment and seek measures for the alleviation of the hardships suffered by the unemployed.

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Targeting Welfare-to-Work Services Using Statistical Tools

The W.E. Upjohn Institute recently completed a pilot project that demonstrates the effectiveness of a statistical assessment and referral system in improving the job retention of welfare recipients participating in welfare-to-work programs. The motivation for the development of this tool was the potential benefit of addressing the specific needs of each welfare recipient, rather than providing all customers with basically the same set of services (which has been the approach of most welfare-to-work programs).

This administrative tool provides a quick and efficient means to assess the needs of participants during their enrollment into welfare-to-work programs and then to use the assessment to refer participants to service providers that are better suited to meet those needs. The system is based on statistical methods and uses administrative data. It is designed to be integrated into an existing intake process, to require minimal (if any) additional staff, and to comply with the procedures and practices of existing welfare-to-work programs.

The Institute developed the assessment and referral system for the Kalamazoo–St. Joseph Workforce Development Board, which administers Michigan's welfare-to-work program, referred to as Work First, for two counties in southwestern Michigan. (The Institute is the administrative entity for the Kalamazoo–St. Joseph Workforce Development Board.) The pilot project took place from January 1998 through March 2000, during which time more than 6,000 welfare recipients participated in the program. The Employment and Training Administration of the U.S. Department of Labor funded the pilot project.

Need for an Efficient Assessment and Referral System

Welfare reform has focused on getting welfare recipients into jobs as quickly as possible. In 1996, the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) replaced the six-decade-old Aid to Families with Dependent Children (AFDC) program with the Temporary Assistance for Needy Families (TANF) program. The underlying principle of the reform movement is that experience on the job is as valuable—if not more so—as classroom or other forms of job preparation and skill development outside the workplace. The reform emphasizes that actual work experience provides self-esteem, self-

ISSN 1075-8445

discipline, and job know-how, and such experience starts welfare recipients on the path of future career advancement and economic self-sufficiency. Michigan's Work First program stresses the placement of welfare recipients into jobs as quickly as possible and provides job search assistance to help with this process.

Targeting employment services for welfare recipients is more effective than a one-size-fits-all approach.

In implementing this approach, state agencies and local offices face significant challenges. Foremost is the challenge of providing the appropriate level and mix of employment services that will prepare welfare recipients for employment and equip them with enough skills to retain their jobs. Most welfare-to-work programs provide the same initial set of services to all welfare recipients, regardless of their needs and past work history. Yet, studies have shown that Work First–type programs are more effective when services are targeted to meet individual needs (Gueron and Pauly 1991). Only after clients have tried to find a job but have failed to do so have local offices provided them with more than a minimal set of services.

In order to target employment services more effectively, local offices must first assess the needs of clients and determine which services are most appropriate in meeting their needs. However, limited program dollars often preclude hiring enough case workers to assess the needs of welfare recipients as they enroll in welfare-to-work programs. Furthermore, there are not enough counselors to assist even those who return to the program after failing to hold a job for any significant length of time. These customers are often required to go through the same orientation and receive the same minimal level of services as they received when they first enrolled in the program. Thus, there is a need for a low-cost assessment and referral system that can be integrated into existing operating systems of welfare-to-work programs.

The Concept of Statistical Assessment and Referral

Central to the Kalamazoo–St. Joseph Workforce Development Board (WDB) pilot project is a statistical assessment tool that is based on the statistical relationship between an individual's attributes and job retention. The basic factors used in the assessment tool are shown in Table 1. Three hypothetical customers are used to illustrate how their attributes determine their employability score. The score is a weighted sum of the attributes, in which the weights reflect the relative contribution of each attribute to job retention. For example, person A is young and has no formal education or prior work experience. Based on the experience of past Work First participants, the model predicts she will find and retain a job with a probability of 1.6 percent. Person C, on the other hand, is older, has a high school education and prior work experience. The model predicts that she has a much better chance of finding and retaining a job, yielding a probability of 88.0 percent. The statistical relationships are derived from the experience of welfare recipients who participated in the Kalamazoo–St. Joseph Work First program a year before the pilot project began.

Because the predicted probability of employment reflects the extent to which an individual faces barriers to employment, the score can be used to determine the level and type of employment services that may help the individual find employment. Those with a high employability score are expected to need little assistance in finding a job, while those with a low score are expected to require significantly more assistance.

Operation of the Pilot Project

The Kalamazoo–St. Joseph WDB pilot used the statistical assessment tool to provide an initial assessment of the needs of welfare recipients as they enrolled in the Work First program. Employability scores were estimated for each enrollee based on administrative data collected by the Work First agency. Local agency staff loaded the information onto a laptop computer, which contained the statistical assessment algorithm. While the enrollees attended an orientation session, the employability scores were computed, and the staff then used those scores to refer participants to three different service providers.

Prior to conducting the pilot project, WDB staff determined which of the three

Table 1 Personal Attributes and Employability Scores

Attributes	Person A	Person B	Person C
Age	22	35	38
No formal schooling	1	0	0
Completed 8th grade or less	0	0	0
Completed 9th grade	0	0	0
Completed high school	0	0	1
GED	0	1	0
Vocational education	0	0	0
Not in target group	0	0	0
Not in compliance	1	0	0
Prior employment	0	1	1
Predicted probability of employment and retention	1.6	88.4	88.0

SOURCE: Author's calculations of Kalamazoo–St. Joseph WDB administrative data for the Work First program.

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service organizations already under contract with the WDB would most benefit participants with certain employability scores. The determination was based on analysis of the data and opinions of WDB staff regarding each service organization. Analysis conducted before the pilot project began found that the number of hours participants engaged in certain service activities varied by service provider. WDB staff also observed that service providers pursued different approaches in providing services that may be more suited for some types of customers than others. Based on this assessment, participants with employability scores in the lowest third of the distribution were assigned to one provider, those in the middle group were assigned to another provider, and those at the high end of the distribution were referred to a third subcontractor, as shown in Figure 1.

Evaluation of the Pilot Project

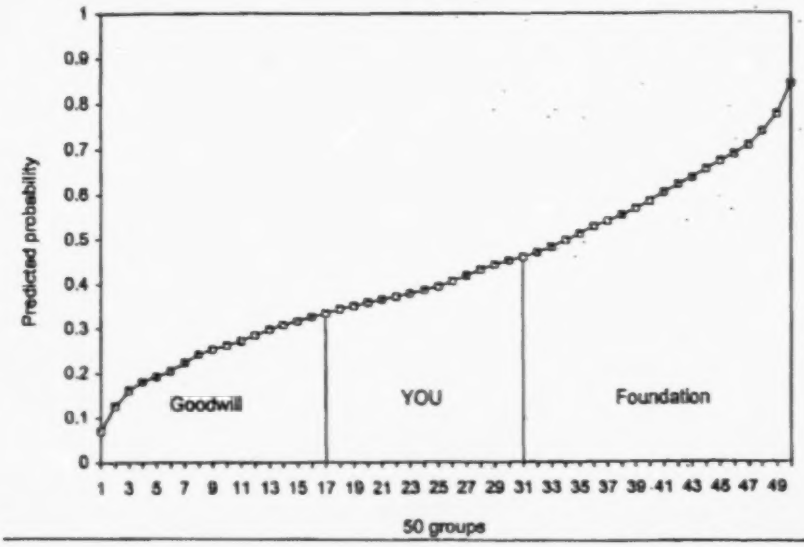
The evaluation assessed the relative effectiveness of referring participants with specific employability scores to various service providers. We used a random assignment design in which participants within each of the three groupings of employability scores were randomly assigned to a control group and a treatment group. Those within the control groups were randomly assigned to each of the three subcontractors.

The evaluation found that referring participants to service providers according to their employability score increased the overall effectiveness of the program. Using a job retention rate of 90 consecutive days as the employment outcome, results showed that

- The statistical assessment tool was successful in distinguishing among participants with respect to their likelihood of employment and retention.
- The optimal referral pattern based on the statistical assessment tool yielded retention rates that were 25 percent higher than if participants were randomly assigned to providers.
- The difference in retention rates between the best and worst referral combinations was 56 percent.

We also looked at the earnings-to-cost ratio as an outcome criterion and found that the ratio of earnings to the average cost of the program during the 90-day retention period was 1.84 for the optimal referral combination versus 1.44 for the worst referral combination, a difference of about 30 percent.

Figure 1 Referral of Participants to Providers Based on Employability Scores (i.e., probability of employment)



Conclusions and Extensions

Evaluation results show that targeting employment services to the specific needs of welfare-to-work participants is more effective in placing and retaining welfare recipients in jobs than pursuing a one-size-fits-all approach. Furthermore, this increase in job retention rates was achieved without significantly increasing the cost of the program.

Encouraged by the success of this pilot project, the Upjohn Institute, with support from the Employment and Training Administration of the U.S. Department of Labor, is also developing a statistical assessment and referral system for services provided within a one-stop environment. These administrative tools, referred to as the Frontline Decision Support System (FDSS), are being developed to help front-line staff quickly assess the needs of customers and refer them to services that best meet their needs. FDSS includes new tools to 1) help customers conduct a systematic search for jobs that offer the best employment match and to set a realistic wage goal, and 2) assist staff in determining which one-stop center services are most likely to be effective in meeting the needs of specific customers in becoming employed. The FDSS tools are designed to be used within the current data retrieval and display systems implemented by states for their one-stop centers. The system is currently being developed for the states of Georgia and Washington.

Randall W. Eberts is Executive Director at the W.E. Upjohn Institute for Employment Research

Suggestions for further reading

Eberts, Randall W. 2001. *Design, Implementation, and Evaluation of the Work First Profiling Pilot Project.* Final Report submitted to the U.S. Department of Labor, August 31; available on the Upjohn Institute Web site: www.upjohninst.org.

Gueron, Judith, and Edward Pauly 1991 *From Welfare to Work* New York: Russell Sage Foundation.

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